GENERAL FISHERIES COUNCIL FOR THE MEDITERRANEAN

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GENERAL FISHERIES COUNCIL FOR THE MEDITERRANEAN

Report of the Tenth Session

Rome (FAO Headquarters), 8 to 13 December 1969

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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INTRODUCTION

1. The Tenth Session of the General Fisheries Council for the Mediterranean (GFCM) was held at FAO Headquarters, Rome, from 8 to 13 December 1969 under the chairmanship of Dr. R. Cusmai and with the attendance of delegates of 14 Member Nations and observers from a non-Member Nation and eight international organizations. It was preceded, on 5 and 6 December, by the GFCM-ICSEM Symposium on Mediterranean Depth Resources and their Exploitation. A list of the participants is given in Annexe II, page 17.

2. Mr. Roy I. Jackson, Assistant Director-General (Fisheries), welcomed the participants. His opening address appears in Annexe V, page 31.

3. The agenda shown in Annexe III, page 27, was adopted.

4. The session was divided into six plenary sessions and the meetings of the following five working parties:

(a) Utilization and Marketing of Fish and Fishery Products

(b) Fishery Statistics and Biological Sampling

(c) Fresh, Brackish and Hypersaline Water Fisheries

(d) Demersal Resources Appraisal and Exploitation

(e) Marine Pollution in the Mediterranean and its Effects on Living Resources and Fishing

I. ACTIVITIES OF GFCM WORKING PARTIES

5. At its first two plenary sessions, the Council examined the intersessional activities of its subsidiary bodies, approved their reports and discussed their future activities. Following are the specific points relating to each of these bodies:

A. WORKING PARTY ON UTILIZATION AND MARKETING OF FISH AND FISHERY PRODUCTS

6. The Council heard a report by the Secretariat on the activities of the working party and approved the report of its first meeting held in Rome from 19 to 21 February 1969 (document GFCM/10/69/4). Various delegates expressed great interest in the work carried out during the biennium and it was agreed that the working party should be maintained. There is increasing concern about the need for better fish preservation methods in small boat fisheries. It was considered that the use of refrigerated seawater (RSW) could provide a solution to this problem and should therefore continue to be investigated, having due regard to the economic effects on production costs and fish prices. The Council agreed that the working party at its second meeting should study the matter further and propose to the Plenary a programme of work for the next biennium.

B. WORKING PARTY ON FISHERY STATISTICS AND BIOLOGICAL SAMPLING

7. The Council considered the report of the first meeting of the working party, held in Rome, from 4 to 6 March 1969 (document GFCM/10/69/8). In particular it was noted that:

(a) A first draft map showing the Mediterranean and Black Sea Area with eight major sub-areas had been prepared and that consideration was being given to the further sub-division of the sub-areas for the purpose of studying selected species.

(b) A List of Statistical Categories had been prepared but that there remained the need for minor revisions.

(c) Work on a List of Species for Statistical Purposes had been commenced but that, for reasons of insufficient progress, the production of a document showing the current position was not warranted. The work was to continue with a view to producing a draft list within the year 1970.

(d) A List of Suggested Data to be collected for Fishing Vessels had been prepared. Minor revisions were required to finalize the list and work was to commence on the classification of fishing craft for the purpose of analysing catch and effort statistics.

(e) Work had been commenced, and was to be continued, on the design of a common system for the reporting of catch (and eventually fishing effort) statistics by national offices to FAO to facilitate the production of an improved Mediterranean and Black Sea Fishery Statistical Bulletin.

(f) Certain types of statistical information on catch, effort, and on the length (and eventually age) composition of landings is essential for assessing the stocks and the state of their exploitation. A provisional list of species to receive priority for the collection of data was included in the report of the working party.

(g) Standardization of the methods of measuring, recording and reporting fish lengths is required; the working party's report defined detailed standards.

(h) A recommendation is included in the working party's report that the GFCM explore the possibility of organizing a regional training course on sampling procedures for purposes of fish stock assessment.

8. The report was adopted with certain reservations concerning the species list for biological sampling, the statistical areas and the vessel classification which were referred to the second meeting of the working party. It was also noted with concern that five of the nine members of the working party did not attend its first meeting and that some difficulty had been experienced in obtaining replies to postal enquiries.

C. WORKING PARTY ON FRESH, BRACKISH AND HYPERSALINE WATER FISHERIES

9. Dr. R. Raimbault, Convenor of the working party, presented the report of its first meeting held in Rome from 1 to 3 April 1969 (document GFCM/10/69/9), which included seven recommendations relating to its programme of work. A lively discussion ensued and many of the delegates emphasized the importance of aquaculture in the Mediterranean region where the possibilities of increasing fish production by the exploitation of natural stocks are limited. In view of the need for regional action to develop aquaculture, there was unanimous support for the continuation of the working party during the next intersessional period. There was also unanimity in agreeing to the need for changing the title of the working party to better describe its activities. (The title "Working Party on Aquaculture and Fisheries in Brackish-Waters" was adopted at the concluding meeting of the session).

10. Suggestions were made by certain delegations that transplantation and acclimatization of exotic species should be included in the programme of work of the working party. Among the groups to be considered for this purpose are Salmonids, Tilapia spp. and shrimps. The need for intensified research on grey mullets, particularly their controlled breeding, was emphasized by the delegation of Israel.

11. The delegation of France offered the facilities of the Fisheries Station at Sète for the organization of a meeting of the working party on mollusc culture.

12. Dr. O. H. Oren, who is responsible for consultations on the International Biological Programme (IBP) work on grey mullets, gave an account of the IBP activities in this field and observed that the GFCM countries could give the lead in grey mullet culture if appropriate action were taken by the Member Nations to organize intensive research and development. The Council expressed its readiness for close cooperation with the IBP in its programme of work on the grey mullets.

13. When adopting the report of the second meeting of the working party, the Council heard with interest a report by the delegate of Israel on the success achieved in the induced breeding of Mugil capito in his country and expressed its wish to obtain a report on the methods and installations used in this work.

D. WORKING PARTY ON DEMERSAL RESOURCES APPRAISAL AND EXPLOITATION

14. The working party's report (document GFCM/10/69/10) was presented by the Secretariat. It was explained that the working party's activities had taken place mainly by correspondence and that some of its members had participated in the preparation of the report on deep-water resources of the Western Mediterranean, drafted in Sète in July 1969, which served as a working document for the GFCM-ICSEM Symposium on Mediterranean Depth Resources and their Exploitation. Replies received from some Member Nations (Cyprus, France, Italy, Spain) to a circular letter from the Secretariat, regarding the implementation of suggestions made by the Ninth Session in connection with specific research programmes on demersal resources, were summarized and discussed.

15. The information on national activities in relation to these research programmes was supplemented with further information by Israel, Turkey and Yugoslavia.

16. There was general consensus in maintaining the working party during the next intersessional period and in recognizing its important function in connection with the promotion and coordination of studies on assessment and management of exploited Mediterranean demersal stocks. It was suggested that the working party might wish to revise its term of reference and its composition for the next period of activities in the light of the conclusions and recommendations of the GFCM-ICSEM Symposium mentioned above and of pertinent aspects of the Programme on Marine Biology and Fisheries established for the Cooperative Investigations in the Mediterranean.

E. WORKING PARTY ON MEDITERRANEAN SCOMBROID RESOURCES

17. The working party's report (document GFCM/10/69/11) was introduced by the Secretariat. It was explained that, although the working party had not met in the intersessional period, data on tuna catches and length composition of bluefin tunas in France, Italy, Spain and Turkey for the years 1965 to 1968 were compiled by correspondence. This work was undertaken by Mrs. R. Landau (Israel), using the data from questionnaires which had been distributed by the Secretariat. It was mentioned that close collaboration was established between this working party and the Bluefin Tuna Working Group of the International Council for the Exploration of the Sea (ICES). As the same data for bluefin tunas have been published, or will be published, by ICES, it was felt that duplication should be avoided.

18. The working party has not been able to give detailed consideration to the programme of tuna tagging in the Mediterranean. In the discussion, however, several delegations reported on their national programmes of tuna investigations, including tagging of bluefin tunas and albacores, collection of tuna catch data and length measurements, as well as studies on Scombroid fish eggs and larvae. Of particular interest was a joint programme undertaken by scientists from France and Italy, in which workers from Spain intended to participate shortly.

19. The participants were informed of the recommendations made recently by the FAO Panel of Experts for the Facilitation of Tuna Research (Third Session, Cadiz, October 1969) to accelerate the tagging programme for bluefin tunas in the Mediterranean. In this connection it was suggested to incorporate a strong component of tuna tagging activities in the programme of the Cooperative Investigations in the Mediterranean.

20. It was furthermore suggested and agreed to transfer the working party into a less formal Network of Tuna Scientists who would act as national contacts for the collection and compilation of tuna data on an international basis, and for other aspects of Scombroid fish research in the Mediterranean.

F. NETWORK OF MEDITERRANEAN SARDINE WORKERS

21. The Council reviewed the activities of the network and recognized that the exchange of information amongst the members was not at a level to yield productive results. Opinion was expressed that the network should be disbanded owing to the lack of interest in establishing a data exchange system since the sardine fishery does not seem to extend beyond the national efforts of Member Nations. The general consensus, however, was to maintain the network with modified title and terms of reference to provide a good coverage of all Clupeoid fishes and the Executive Committe was requested to decide, in consultation with the Member Nations and the Secretariat, who would be appointed as the Convenor of the network.

22. The meeting, as a result of these decisions, resolved that the Network of Clupeoid Workers be asked to make new efforts to orient the scientists of Member Nations to undertake research which would yield data meaningful for stock assessment work. The quantitative egg and larvae surveys designed for relative abundance estimations should not be excluded.

23. Recognizing further that the most important data useful for stock analysis are catch statistics and length measurements, and knowing that the GFCM Working Party on Statistics and Biological Sampling also has Clupeoid species under consideration, the Council proposed that the network establish close collaboration with the Working Party on Statistics and Biological Sampling to avoid unnecessary duplication of effort and undesirable overlap, and ensure that the recommendations of the working party be implemented by the Member Nations.

II. RESULTS AND FOLLOW-UP OF THE GFCM-ICSEM SYMPOSIUM ON MEDITERRANEAN DEPTH RESOURCES AND THEIR EXPLOITATION

24. The report on the symposium was submitted by its Chairman, Dr. Cl. Maurin. Especially for the benefit of delegates who had not attended that meeting, Dr. Maurin summarized the present situation of our knowledge with regard to deep resources and their exploitation in the Mediterranean and emphasized the conclusions and recommendations of the symposium.

25. During the discussion, additional information was supplied, chiefly as regards topography and hydrology in the Eastern Mediterranean. According to the Israeli delegation, there would still be, in this region, certain zones that are not trawled owing to a lack of suitable vessels and gear and where experimental fishing should be conducted. Also mentioned were the possible repercussions (decrease in oxygen content, increase in the content of nutrient matter, etc.) on the demersal resources in this region of the gradual increase in surface salinity and in pollution.

26. The Council approved the report of the symposium (annexe VI, page 33) and its recommendations (see page 42).

III. INTERNATIONAL COOPERATION

A. COOPERATIVE INVESTIGATIONS IN THE MEDITERRANEAN (CIM)

27. The themes of the CIM Biological and Fisheries Programme which were established at the first meeting of the International Group for Scientific Coordination of the CIM (Monaco, June 1969) were presented by Mr. M. Oliver, the CIM fishery coordinator. The meeting approved this programme unanimously. It recognized that the work of the participants in the CIM would be facilitated by the existence of an exhaustive bibliography on the different scientific aspects of the study.

28. The Secretariat informed the participants that several experts had been assigned to draw up detailed biological and fishery programmes for the CIM which would take account of national projects in this field. The delay occurring in the presentation of the national programmes to the organizers of the CIM was deplored, and the meeting hoped that this situation would improve in order that national and CIM programmes might be harmonized from 1970 onward. Accordingly, the following resolution was adopted:

RESOLUTION GFCM/1/69

> The General Fisheries Council for the Mediterranean,
> aware of the importance of complete prior knowledge of national programmes for the implementation of the Biological and Fisheries Programme of the Cooperative Investigations in the Mediterranean,
>
> urges its Member Nations participating in the CIM to communicate these national programmes immediately to the Secretariat of the Intergovernmental Oceanographic Commission for centralization.

29. An ad hoc meeting heard from Mrs. R. Paldi a report on her computer produced Mediterranean regional bibliography. The meeting found this initiative encouraging and important particularly for the Cooperative Investigations in the Mediterranean, and recommended that the Member Countries, and especially their fishery libraries, cooperate actively in the preparation of such a bibliography for the whole of the Mediterranean.

B. FUTURE COOPERATION WITH THE INTERNATIONAL COMMISSION FOR THE SCIENTIFIC EXPLORATION OF THE MEDITERRANEAN SEA (ICSEM)

30. Relations between the GFCM and the ICSEM have developed considerably since the Ninth Session of the Council. This was evidenced, firstly, on the occasion of the Symposium on Plankton organized in September 1968 within the framework of the Twenty-First Plenary Assembly of ICSEM by the inclusion on the agenda, at the request of the GFCM, of the item "Tuna eggs and larvae. Relations with the environment". The discussion of this point led the ICSEM and the GFCM to the adoption of a joint resolution recommending that research be promoted on the distribution of the eggs and larvae of the bluefin tuna and albacore, and such research is now partly carried out. Secondly, the GFCM had taken the initiative to invite the ICSEM to co-sponsor the Symposium on Mediterranean Depth Resources and their Exploitation, thus enabling that meeting to cover most of the problems involved in the exploitation of deep-water resources and to demonstrate the close relationships that exist between the different sciences of the sea and their application. Thirdly, the organizing of the Cooperative Investigations in the Mediterranean creates new bonds between the secretariats of the Commission and of the GFCM.

31. The Council expressed its appreciation of the arrangements enumerated above. However, it hoped that cooperation with the ICSEM would be further expanded and that, at an early stage, means would be sought on the level of the governing bodies and secretariats of the Commission and the Council to coordinate the activities of these two agencies in the fields where the need for such cooperation is felt. This coordination should be directed, mainly for the purpose of reducing possible duplication of effort, towards the organization of common meetings of ICSEM and GFCM which would facilitate the attendance of delegations, especially of those from countries with limited means in terms of specialized staff or budget. It would also simplify, through the existence of a joint secretariat, the implementation of cooperative projects. In the light of these considerations, the Council adopted the following resolution:

RESOLUTION GFCM/2/69

The Council,

noting with satisfaction the favourable trend of its working relations with ICSEM,

wishing to broaden these relations in view of allowing the optimun utilization of the human, physical and financial resources of the Member Nations, favouring attendance at meeting through adoption of multidisciplinary work topics and arriving at the implementation of joint research projects,

assigns to the Executive Committee and to the Secretariat the tasks of initiating consultations and negotiations with the Bureau and the Secretariat of ICSEM in order to study the forms of close cooperation between these two agencies, with a view to an enhanced effectiveness of their action through rationalization of the means at their disposal and their structures.

IV. MARINE POLLUTION IN THE MEDITERRANEAN AND ITS EFFECTS ON LIVING RESOURCES AND FISHING

32. The Secretariat introduced the subject referring to document GFCM/10/69/16. It pointed out that a review on marine pollution would be very useful to Member Nations and various international organizations.

33. It was generally agreed that the Council should establish an Ad Hoc Working Party on Marine Pollution in the Mediterranean and its Effects on Living Resources and Fishing for the duration of the session. Its terms of reference would be to start the preparation of a review on the state of marine pollution in the Mediterranean by drafting a suitable questionnaire to be sent to all countries bordering this sea.

34. During the discussion which ensued concerning the work of this working party, it was suggested that information on the legal measures being taken at present regarding pollution in the various countries be collected. A similar method to that used by the experts when compiling the Report of the Working Group on Pollution of the North Sea, issued by the International Council for the Exploration of the Sea, could be adopted. The delegate from Turkey stressed the need for a flow of scientific knowledge from developed to developing countries in the field of marine pollution research and proposed an exchange of scientists for this purpose. It was further proposed that in order to avoid duplication of information the working party should limit its interest to areas of importance to fisheries since several other international bodies were already dealing with other aspects of pollution. This should be borne in mind during the preparation of the report. The report should, however, take into account the effects of pollution on living resources from the widest possible point of view in order to ensure the availability of the maximum data on pollution of the Mediterranean during the FAO Technical Conference on Marine Pollution and its Effects on Living Resources and Fishing, to be held in Rome in December 1970.

V. PROMOTION AND COORDINATION OF UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP) AND OTHER MULTILATERAL ACTIVITIES IN THE AREA

35. The Secretariat pointed out the new means of UNDP assistance which, if successful in the Indian Ocean, might be applicable to an international fishing programme in the Mediterranean region, such as the one recommended by the First Meeting of the International Group for Scientific Coordination of the CIM (document GFCM/10/69/13). The current status of the UNDP/FAO assisted projects in the Mediterranean area (Algeria, Tunisia and Turkey) were briefly reviewed and the Council noted with satisfaction the successful formulation of these projects.

36. With regard to a specific query about possible financial assistance for research on the preservation of fish in refrigerated sea water, it was agreed that the Secretariat will study the proposal carefully with a view to discuss possible means of assistance under a suitable programme, in consultation with the governments concerned.

VI. OTHER MATTERS

A. MEETING OF THE EDITORIAL BOARD

37. The Editorial Board, consisting of the Chairman and the Technical Secretaries of the working parties and of the GFCM Secretary, met on 12 December 1969 and proposed for the consideration of the Executive Committee the following list of documents for publication, after certain alterations and further editing requested in detail by the Editorial Board, in the series GFCM Studies and Reviews. The proposed papers are listed below in the order of priorities:

- Marketing of fresh and frozen fish in Mediterranean countries
- Pilot-scale tests on the preservation of fish in ice and in refrigerated sea water in Yugoslavia
- Review of the techniques of smoking carp, mullet and eel
- Variations du rendement de la pêche (kg/h) sur le plateau des Îles Baléares entre 1958 et 1969 (M. Massuti)
- La pêche à la crevette de grand fond. Etudes sur le rendement à bord d'un nouveau navire de pêche s'occupant exclusivement de pêche sélective. Prospection de nouveaux fonds de pêche dans les Îles Baléares (M. Massuti)
- Nouvelle étude bionomique des fonds à crevettes de grand fond dans les Îles Baléares après dix années d'exploitation (M. Massuti)
- Diurnal and seasonal variations in the catch of Nephrops norvegicus L. in the central Adriatic Sea (S. Jukić)
- The Norway lobster catch (Nephrops norvegicus L.) and associated populations in the Yugoslav trawl fishery of the central Adriatic Sea (S. Jukić)
- Studies on the distribution, growth and abundance of migrating fry and juveniles of mullet in a brackish coastal lake (S. El Zarka et al.)
- Offshore trawl fish from the Mediterranean coast of Israel (L. Zismann)
- Fishing surveys and commercial exploitation of deepwater trawling grounds in the Eastern Mediterranean (M. Ben Yami)

38. It was suggested that Mr. S. Jukić be requested to prepare a Fisheries Synopsis on the Mediterranean Norway lobster (Nephrops norvegicus).

39. Mr. R. Raimbault was requested to make proposals to the Secretariat for a further dissemination to the workers in the field of aquaculture of the technical documents prepared for the first meeting of the Working Party on Fresh, Brackish and Hypersaline Water Fisheries (see document GFCM/10/69/9).

40. The Editorial Board considered that the investigation and exploitation of the lagoons in the GFCM area will become a major object of study in the future, and it recommended that FAO consider the possibility of establishing a series or sub-series within the presently existing publications, to cover the investigation on lagoons and estuaries, and that this publication be given a wide distribution. The Editorial Board also suggested that FAO prepare a bibliographic list of its own publications in this field to inform the workers of the existence and availability of such papers.

B. MISCELLANEOUS

41. The study of the catalogue "Fishing charts of the Mediterranean" (document GFCM/10/69/15) led several delegates to indicate the present status of fishery cartography in their country. New information will be incorporated in the catalogue as it will reach the Secretariat.

42. The document GFCM/10/69/14, "Directory of National Fishery Services and Research Institutes in the Mediterranean" was reviewed by the Council. It was suggested that a more precise English title be given to the Directory by the Secretariat. Participants were requested to send to the Secretariat their possible proposals for the revision of this document before its final printing.

43. On the occasion of the retirement of Mr. Furnestin, Director of the Institut scientifique et technique des Pêches maritimes of France and leader of the French delegation to several sessions of the GFCM, participants passed a motion offering to him the Council's thanks for the part he has taken in its activities and its most warm wishes for a long and active retirement.

VII. CONCLUDING MATTERS

A. ADOPTION OF THE REPORT AND RECOMMENDATIONS

44. The following five working parties met from 10 to 12 December 1969:

- Utilization and Marketing of Fish and Fishery Products (annexe VII, page 47)
- Fishery Statistics and Biological Sampling (annexe VIII, page 53)
- Fresh, Brackish and Hypersaline Water Fisheries (annexe IX, page 67)
- Demersal Resources Appraisal and Exploitation (annexe X, page 73)
- Marine Pollution in the Mediterranean and its Effects on Living Resources and Fishing (annexe XI, page 79)

This report and the general part of the report of the session were approved by the Council.

45. The Council concluded that the system of working parties introduced in a systematic manner after the Ninth Session was, at the present time, the most apposite for the promotion of internationally coordinated programmes aimed at developing the Mediterranean fisheries. Further it confirmed that these working parties should meet regularly both during and between sessions. The Council was, however, disturbed to note that although the participation of experts in inter-sessional meetings during the past biennium was generally satisfactory, only a few of the members of the working parties had been included in the national delegations to the Tenth Session. The Council was of the view that if this practice became more general, it would result in a lack of continuity in the activities of the working parties and a significant reduction of their efficiency. Recognizing these considerations, the Council adopted the following recommendation:

RESOLUTION GFCM/69/3

The Council,

recognizing that the working parties of GFCM at present constituted the most efficient means of promoting the programme laid down for the development of the Mediterranean fisheries,

recognizing further that these working parties can satisfactorily complete their tasks only by meeting with sufficient regularity and by the presence of the same members at all meetings to ensure continuity of the action undertaken,

recommends

- that FAO assists, to the maximum extent of its financial and technical means, the inter-sessional meetings of the working parties of GFCM

- that the Member Nations of GFCM include the members of the working parties in their delegations to the sessions of the Council as experts.

46. The Council whilst appreciating the proposal of the Working Party on Demersal Resources Appraisal and Exploitation that a symposium on the rational protection of the demersal resources of the Mediterranean be organized in connection with the Eleventh Session of the GFCM, however accorded priority to the recommendation appearing in paragraph 12 of the report of the Working Party on Fresh, Brackish and Hypersaline Water Fisheries. It was thus decided that the theme of the symposium to precede the Eleventh Session will be Aquaculture in Brackish Waters in the Mediterranean region".

B. ELECTION OF THE CHAIRMAN AND VICE-CHAIRMEN

47. The Council elected by general consent:

Chairman	Mr. M. Oliver
First Vice-Chairman	Mrs. F. Ktari
Second Vice-Chairman	Mr. I. Artüz

C. DATE AND PLACE OF NEXT SESSION

48. Official invitations for the Eleventh Session to take place in Greece and Malta were transmitted to the Council by the delegates of those countries on behalf of their governments. The Council warmly thanked the countries of Greece and Malta for their offers but, being unable to reach an immediate decision, decided that the date and place of the Eleventh Session would be fixed by the Chairman of GFCM in consultation with the Director-General of FAO.

ANNEX I

MEMBER NATIONS

(as of 31 December 1969) *

Algeria

Bulgaria

Cyprus

France

Greece

Israel

Italy

Lebanon

Libya

Malta

Monaco

Morocco

Spain

Tunisia

Turkey

United Arab Republic

Yugoslavia

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*Bulgaria became a member on 3 November 1969

The United Kingdom withdrew on 25 June 1968

ANNEXE II

LISTE DES PARTICIPANTS
LIST OF PARTICIPANTS

I. ETATS MEMBRES/MEMBER NATIONS

BULGARIE/BULGARIA

Représentant-Representative : DEKOV Diko
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---

*A également participé au colloque/Also attended the Symposium

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ANNEX III

AGENDA

A. INTRODUCTORY AND PROCEDURAL MATTERS

1. Opening of the session
2. Adoption of the Agenda and arrangements for the session
3. Report of the Executive Committee and the Secretariat

B. ACTIVITIES OF GFCM WORKING PARTIES

4. Utilization and Marketing of Fish and Fishery Products
5. Fishery Statistics and Biological Sampling
6. Fresh, Brackish and Hypersaline Water Fisheries
7. Demersal Resources Appraisal and Exploitation
8. Mediterranean Scombroid Resources
9. Network of Mediterranean Sardine Workers

C. RESULTS AND FOLLOW UP OF THE GFCM-ICSEM SYMPOSIUM ON MEDITERRANEAN DEPTH RESOURCES AND THEIR EXPLOITATION

D. INTERNATIONAL COOPERATION

10. Cooperative Investigations in the Mediterranean (IOC-ICSEM-GFCM)
11. Future cooperation with ICSEM

E. MARINE POLLUTION IN THE MEDITERRANEAN AND ITS EFFECTS ON LIVING RESOURCES AND FISHING

F. PROMOTION AND COORDINATION OF UNITED NATIONS DEVELOPMENT PROGRAMME AND OTHER MULTILATERAL ACTIVITIES IN THE AREA

G. OTHER MATTERS

H. CONCLUDING MATTERS

12. Adoption of the report and recommendations
13. Election of officers
14. Date and place of next session

ANNEX IV

LIST OF DOCUMENTS PREPARED FOR THE SESSION

GFCM/10/69/1	Provisional Agenda
GFCM/10/69/2	Annotated Provisional Agenda and Provisional Timetable
GFCM/10/69/3	Report of the Executive Committee and the Secretariat
GFCM/10/69/4	Report of the first meeting of the Working Party on Utilization and Marketing of Fish and Fishery Products
GFCM/10/69/5	Marketing of fresh and frozen fish in Mediterranean countries
GFCM/10/69/6	Pilot scale tests on the preservation of fish in ice and in refrigerated sea water in Yugoslavia
GFCM/10/69/7	Review of the techniques of smoking carp, mullet and eel
GFCM/10/69/8	Report of the first meeting of the Working Party on Fishery Statistics and Biological Sampling
GFCM/10/69/9	Report of the first meeting of the Working Party on Fresh, Brackish and Hypersaline Water Fisheries
GFCM/10/69/10	Report of the GFCM Working Party on Demersal Resources Appraisal and Exploitation
GFCM/10/69/11	Report of the Working Party on Mediterranean Scombroid Resources
GFCM/10/69/12	Progress Report on the Activities of the GFCM Network of Sardine Workers for the Biennium 1968/69
GFCM/10/69/13	Report of the First Meeting of the International Group for Scientific Coordination of the Cooperative Investigations in the Mediterranean
GFCM/10/69/14	Directory of National Fishery Services and Research Institutions in the Mediterranean
GFCM/10/69/15	Fishing Charts of the Mediterranean
GFCM/10/69/16	Marine Pollution in the Mediterranean and its Effects on Living Resources and Fishing
GFCM/10/69/17	Summary Report of the GFCM-ICSEM Symposium on Mediterranean Depth Resources and their Exploitation
GFCM/10/69/18	Bulletin of Fishery Statistics (18) - Mediterranean and Black Sea: fishery statistics, 1968
GFCM/10/69/19	Global Ocean Research
GFCM/10/69/Inf.1	Information for Participants
GFCM/10/69/Inf.2	Provisional List of Documents
GFCM/10/69/Inf.3	Provisional List of Participants

ANNEX V

OPENING ADDRESS BY MR. ROY I. JACKSON

ASSISTANT DIRECTOR-GENERAL (FISHERIES)

Mr. Chairman, Distinguished Delegates, Ladies and Gentlemen,

It is my pleasure to welcome you on behalf of the Director-General to the Headquarters of the Food and Agriculture Organization, on the occasion of the Tenth Session of the General Fisheries Council for the Mediterranean. I see in this assembly many familiar faces reminding me of the last session we held in Split two years ago, and I hope the present meeting will result in as dynamic and as fruitful a session as the previous one.

There are, however, new participants among you and I am particularly happy to welcome the delegation of the People's Republic of Bulgaria. The adhesion of Bulgaria to the GFCM will, no doubt, stimulate working relations between experts in the Black Sea and the Mediterranean and lead to closer cooperation regarding the fishery problems in the area.

During the last session, the Council decided to adopt new methods of work to improve its own efficacy. These consisted mainly in the establishment of working parties on Fishery Statistics and Biological Sampling, on Fresh, Brackish and Hypersaline Water Fisheries, on Mediterranean Scombroid Resources, on Demersal Resources Appraisal and Exploitation and on the Utilization and Marketing of Fish and Fishery Products. These working parties were given precise terms of reference to study the fishery problems that your Ninth Session considered of major interest in the region and FAO allotted funds which allowed the intersessional meetings of three, out of the five, working parties established.

A good deal of time has been dedicated to these working parties on your agenda. Besides reviewing their activities during the past inter-sessional period and the present session, you will have to select the subjects of primary interest to be studied during the coming biennium, to decide which working parties should be established or maintained to deal with them, and to draft their appropriate terms of reference.

It is my feeling that substantial results have been achieved so far through the activities of these groups of experts. However, I would like to stress that the Council, at the same time as it decided to establish working parties, also requested its Member Nations to facilitate the participation of their experts at meetings convened in conjunction with biennial sessions of the GFCM. Although member countries are well represented at the present session, I feel that even more support in this respect could be given by the Member Nations. The Council might therefore like to emphasize the fact that positive results will depend on the continuity of the working parties' action which in turn depends on sufficient frequency of their meetings.

Among the other items of the agenda which will call for your attention and consideration is the review of the report of the GFCM-ICSEM Symposium on Mediterranean Depth Resources and their Exploitation, which was held last Friday and Saturday, and the proposals for action which it has made. I think your decisions in this respect will be of the utmost importance for the future development of the fisheries of this area since, as discussed during the symposium, it is quite likely that a better and more rational utilization of the deep resources could improve the yield of the Mediterranean fisheries not only in quantity, but especially in quality. You may perhaps feel that you would like to propose the organization of a further symposium to be held in conjunction with the Eleventh Session of the GFCM. This being the case, its subject matter could be discussed during this session.

The items on international cooperation and multilateral activities in the area have often been put on the agendas of your sessions. They present, however, a very actual interest owing to the necessary development of common activities between the GFCM and the International Commission for the Scientific Exploration of the Mediterranean Sea and to the participation of the Council in the Cooperative Investigations in the Mediterranean. In this respect, I would like to express my appreciation of the work of the experts selected by the Executive Committee to prepare a coherent fishery programme which will be included in the programme of the Cooperative Investigations.

Finally, it is needless to stress to an audience so well informed regarding the menace of marine pollution, the importance of the agenda item dealing with its effects, on living resources and fishing. The review of the state of pollution in the Mediterranean which it is proposed to prepare will, of course, greatly benefit the FAO Technical Conference on Marine Pollution and its Effects on Living Resources and Fishing which will take place here about one year from now. We hope, also, that it will be used as a means to help governments take positive action to limit and, if possible, eliminate this growing danger which is particularly serious in a closed sea such as the Mediterranean.

Mr. Chairman, I am personally aware of the many difficulties experienced by the GFCM in its work, but I wish to assure you once more that the FAO Department of Fisheries is willing to provide the maximum possible support to this Council in its endeavour to promote harmonious fishery development in the Mediterranean and Black Sea area.

ANNEX VI

REPORT OF THE GFCM-ICSEM SYMPOSIUM ON MEDITERRANEAN DEPTH RESOURCES AND THEIR EXPLOITATION

(Rome, FAO Headquarters, 5 and 6 December 1969)

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REPORT OF THE GFCM-ICSEM SYMPOSIUM ON MEDITERRANEAN DEPTH RESOURCES AND THEIR EXPLOITATION

INTRODUCTION

1. The GFCM-ICSEM Symposium on Mediterranean Depth Resources and their Exploitation was held at FAO Headquarters in Rome, on 5 and 6 December 1969, in the presence of delegates of eleven Member Nations and of three observers from international organizations (see Annexe I of the report of the session, page 17).

2. The symposium was opened by Dr. Cusmai, Chairman of the GFCM, and the participants were greeted by Dr. M. Ruivo, Director of the Fishery Resources Division of the FAO Department of Fisheries.

3. Dr. Cl. Maurin was elected Chairman of the symposium and Mr. M. Bonnet, Mr. M. Oliver and Prof. J. M. Pérès were appointed Rapporteurs.

4. The agenda in appendix 1 was adopted.

5. The report "Deep resources of the Western Mediterranean and their exploitation"1/ which had been drafted at a meeting preparatory to the symposium (held at the Sète laboratory of the Institut scientifique et technique des Pêches maritimes, 1 to 4 July 1969), was used as a basic document for the discussion on items B, C and D of the agenda. During the discussion, the information on deep water resources of particular areas in the Mediterranean was augmented by data from very recent research. Unfortunately, no comprehensive document on the Eastern Mediterranean was available to the symposium and the urgent need to prepare such a review was emphasized by the meeting.

6. After the conclusion of the symposium, the participants were invited to a reception on board the French research vessel, THALASSA, berthed at Civitavecchia. The expedition leader, Dr. Cl. Maurin, gave an account of the preliminary results achieved during the expedition on exploratory trawling in the area between Pantelleria, the southeastern coast of Tunisia, Cape Misurata and Malta, and also in the Gulf of Sidra.

I. INFLUENCE OF ENVIRONMENTAL FACTORS ON THE PRESENCE AND ABUNDANCE OF DEEP WATER RESOURCES

7. At present, the deep resources liable to be the object of commercial exploitation are located between 200 and 1 200 metres depth.

8. The exploitation of deep water resources should be based on a better understanding of the populations involved. This, as well as the fishing operations themselves, will require a marked improvement in knowledge of the topography of the slope.

A. TOPOGRAPHY

9. The topography of the Mediterranean Sea floor is unfavourable for trawling operations, the reason being that the continental shelf, at present the main trawling area, is, with certain exceptions, narrow and rugged. The continental slope is often steep; it is frequently cut by deep rifts and is consequently virtually unfished.

1/ This report will be published in the series GFCM Studies and Reviews

10. However, several regions of the Western Mediterranean, where the sea bottom at from 200 to 800 metres stretches out in a gentle slope, constitute a sort of additional shelf. This is particularly the case with the region Ceuta-Cap des Trois Fourches, the northern coast of Tunisia, the eastern coast of Corsica and Sardinia, the area extending between the islands of Majorca and Ibiza, and the straits between the mouth of river Elba and the Balearic Islands.

11. These areas are usually covered with muddy sediment, less often with sandy or sandy/muddy sediment (Mediterranean Morocco, the Straits of Messina). Muddy or sandy/muddy sediments favour the presence, and in certain cases the abundance, of deep-water shrimps (Penaeidae and Pandalidae) and fish of the families Gadidae and Merluccidae. When the muddiness is more pronounced, Norway lobsters are more common than Penaeidae.

12. The report drawn up by the Sète meeting covers in detail the topography of the sea bottom in the Western Mediterranean and in the Adriatic. With regard to the Eastern Mediterranean, information was supplied for the coasts of Cyprus, Israel and Turkey as well as for the area extending between Cyrenaica, Malta and Tunisia. In Turkey there are trawlable zones at depths of between 200 and 300 metres and even beyond 300 metres in the eastern sector of the southern coast of the country. However, these bottoms do not seem to be covered with sediment, whence their poverty. Around Cyprus, bottoms suitable for trawling are also found, up to about 500 metres of depth. The area extending from off Cape Andreas to the Gulf of Alexandretta at depths of from 500 to 700 metres seems to be of some interest.

13. With regard to the western part of the eastern Mediterranean basin, the topography is of two different kinds:

- in the eastern part (Gulf of Sidra), the sea bottom is rugged. At many points, areas of faults and fractures, often recent in appearance, are found. The sediment cover appears to be extremely thin or even nil. This characteristic makes the region unsuitable for trawling.

- in the western part of this region, that is, west of the line from Cape Misurata to Malta, the bottom from depths of 200 to 500 metres slopes down very gently. Only here and there does one come across certain topographical features such as banks or ditches, in particular the Medina Bank. The sediment covering these bottoms is generally sandy/muddy or sandy, that which is muddy lying only in the southern and eastern parts of the sector. Because of these topographical features, the bottom here can, generally speaking, be readily trawled.

B. OTHER ABIOTIC FACTORS

14. One important factor is the nature of the sediment (which often is a result of circulation conditions). It sometimes has a substantial influence on the presence and abundance of certain exploitable species, crustaceans, shellfish and fish. Thus, the Penaeidae shrimps, Aristeus and Aristeomorpha are more abundant on a deep-water Funiculina or Isidella mud bottom than on the muddy/sandy or sandy Brisingella bottoms.

15. Another interesting abiotic factor results from hydrological conditions, in particular, temperature, salinity and oxygenation insofar as these can affect the distribution of a species (or one of its life history stages), by trespassing critical ecological thresholds. The influence of these factors may affect not only the bathymetric distribution but, in special cases also, the frequency and abundance of species. It should be noted that man may alter hydrological conditions, especially by chemical pollution and reduction of the oxygen content; he may also change topographical conditions and give rise to a substitution of fauna, as was noted, for example, following the casting up of aluminium slag in the Cassis Canyon.

C. NATURE OF BENTHIC BIOCENOSES

16. We have a fairly good knowledge of the benthic biocenoses and their respective facies, at least in the western basin of the Mediterranean; further research is required in the eastern basin.

D. BIOMASS

17. With regard to the exploitation of resources, quantitative research of biomass, almost non-existent to date, must be performed. The biomass is difficult to evaluate and a suitable approach can only result from the simultaneous use of collectors of various types, including those operating by suction.

18. Secondary production will be even more difficult to appraise, as it will be necessary to know in advance the average longevity of the species concerned. It must be stressed, moreover, that overall assessments of biomass and production would be senseless and useless until a better knowledge of the problem of trophic relations has been acquired. Studies to this effect, which are easier than the evaluation of production, are already in progress at various research centres but require further intensification.

19. The interest of biomass research is plain. However, it was stressed that a large biomass does not always indicate the presence of commercial species such as, for example, deep-water shrimps.

E. OTHER BIOTIC FACTORS

20. The concept of the wealth of a fishing ground is a relative one, which must be based not only on its yield but also on the commercial value of the species.

21. Plankton fertility, though a possible factor, is generally low and discontinuous, except in the coastal eutrophication zones or in the domes of the intermediate layers further out to sea.

22. The benthic production (both primary and secondary) of the continental shelf, is a factor of importance in relation to presence and abundance of deep resources in an area, as also are the conditions in which the organic material derived from this production is carried directly or indirectly to the bathyal zone (temporary upwellings in areas affected by winds from the northern sector; cascading in areas with strong winter cooling of surface waters; energy transfer by species with seasonal or daily migration habits; possibly, tidal currents).

II. PRESENT STATUS OF THE DEEP RESOURCES AND THEIR EXPLOITATION

A. WESTERN MEDITERRANEAN

23. The Sète report clearly shows the similarity between the various sectors of the Western Mediterranean with regard to the nature of the bottom of the continental slope. Thus, it is normal to find the Terebratula level at depths of between 150 and 220 metres, the Funiculina level at between 220 and 450 metres and the Isidella level at beyond 450 metres. The local differences that may be encountered in the distribution of these levels are solely quantitative.

24. In general, catches at depths of between 150 and 450 metres consist mainly of shrimps of the genus Parapenaeus and of fish of the families Gadidae and Merluccidae, while at depths of over 450 metres, it is found that in muddy bottom areas there is a greater abundance of the demersal shrimps Aristeus and Aristeomorpha. Such is the case off the coast of North Africa, the Balearic Islands, Sardinia and Corsica. In regions where the sediment is sandier, Nephrops norvegicus (Norway lobster) is dominant, as happens in the Gulf of Genoa.

25. Recent information on yields from around the Balearic Islands between 1958 and 1969 have brought to light substantial qualitative and quantitative variations. A very large drop in total landings is observed, doubtless due to overfishing. From the qualitative point of view, the replacement of certain species by others is noticed. Moreover, fishery-independent fluctuations in shrimp production are likewise observed. These fluctuations may be due to natural factors, among which hydrological conditions and presence of flocculated organic material near the bottom have been mentioned. The fact that overfishing is already taking place in some areas of the continental slope was emphasized, but on the other hand it was recognized that new prospects of exploiting the slope might exist, particularly in the region of the Alboran Sea as well as along the southeastern coast of Spain.

26. Recent results on deep-sea trials with longlines carried out by the Yugoslavs in the Southern Adriatic show that rugged areas can be fished with good yields by this method. Hake is dominant at depths of from 250 to 350 metres and Polyprion at between 500 and 700 metres.

B. EASTERN MEDITERRANEAN

27. The resources of the Eastern Mediterranean are less known than those of the western basin, although recent research has produced some concrete data for certain areas of that region.

28. Turkey. Research was carried out on the Mediterranean coasts of Turkey at depths of between 100 and 450 metres, as also in the Aegean Sea at about 500 metres. The findings revealed that the slope of these areas is very poor, from both the quantitative and qualitative standpoints. Yet the yield from the Aegean Sea are slightly higher than those from the slope off Turkey.

29. Cyprus. Findings regarding the deep waters around Cyprus and over the slope between Cyprus and Turkey are much the same as for Turkey.

30. Israel. Somewhat more promising findings have been obtained offshore of Israel at depths beyond 200 metres, where in the upper waters hake, red mullet, dentex and black perch are relatively abundant. At the lower level, deep-sea shrimps are well represented.

31. Libya - Malta - Tunisia. The oceanographic research vessel THALASSA, during her 1969 cruise, collected data in the areas between Malta, the eastern coast of Tunisia and the coasts of Tripolitania and Cyrenaica. The findings can be summed up as follows: the sea bottom of the Gulf of Sidra has a rough topography and is unsuitable for trawling; moreover, the catch is extremely small there. On the other hand, off the eastern coast of Tunisia, and to the north of the Lybian coast (west of Cape Misurata), the upper portion of the continental slope, at depths of from 150 to 300 metres, is fairly rich. The species caught there are red mullet, hake, John dory, black perch, and pink shrimp (Parapenaeus). Beyond depths of 300 metres, the catch is small and landings are of no commercial interest, save at depths of from 550 to 600 metres where deep-sea shrimps (Aristeus and Aristeomorpha) can be taken in considerable quantities. Similar results were obtained by Tunisia at depths down to 300 metres with respect to species distribution, relative abundance and yields.

III. PRESENT-DAY FISHING METHODS AND GEAR

32. The gear used in the Mediterranean to exploit benthic resources beyond the continental shelf can be divided into two types: trawls and fixed gear (longlines, pots and gillnets).

A. TRAWLS

33. Two types of trawls are used: traditional trawls (Italian trawl for instance) and the new high bottom trawl, the latter being used only to a limited extent. Detailed designs of both gear will be published in the FAO Catalogue of Fishing Gear Designs and are also reproduced as an annexe to the Sète report. The two trawls are markedly different, viz:

- the Italian trawl has a small vertical opening, generally smaller than one metre, and its meshes stay practically closed during the fishing operation

- the new high opening bottom trawl has a large vertical opening and its filtration capacity is increased by the fact that its meshes stay open during the fishing operation

- the high opening bottom trawl is of much simpler design than the Italian one.

34. Despite their differences, it should be noted that both types were designed for the continental shelf rather than for deep waters. The traditional trawl and its accessories have successively been modified as depth of fishing increased, but these modifications are the result of fishermens' empirical experience rather than the outcome of technological research. As regards the Italian trawl, for instance, the modifications consist in increasing the size of the trawl, its buoyancy and the length of its sweep-lines. On muddy shrimp grounds, wings with wide gutters are used. While the high opening bottom trawl has proved definitely superior to the old type of trawl for working the continental shelf, the experience so far obtained seems to indicate that the catches of deep shrimp with this gear are lower than with the Italian trawl. This may be explained by the behaviour of these species, which burrow into the mud during daytime, while the high opening bottom trawl does not dig into the bottom deep enough to catch them. At night, the shrimps are believed to make a vertical ascent that would bring them out of the range of the trawl despite its considerable height.

35. It is observed that trawlers operating in the various parts of the Mediterranean are of a similar type. They are small, generally wooden vessels, rarely over 25 metres long, and usually equipped with engines of less than 300 hp. All of them are stern trawlers; the same vessels and equipment are used for working both the continental shelf and the slope, a situation which is certainly not ideal from the technical point of view. Echo-sounding equipment is usually carried, but accurate navigational aids such as radar and direction finders are scarce. It is to be noted that radio-navigation systems such as DECCA are poorly developed in the Mediterranean; this circumstance is obviously a handicap for the exploitation of the sea-bottom.

B. FIXED GEAR

36. Fixed gear (longlines, pots and gillnets) is largely used for inshore fishing but only to a very slight extent for deep-sea fishing. Moreover, it must be stated that in the cases where such gear is used, the fishing either has a marked artisanal character, or is still in the experimental stage. Thus, along the coasts of Maghreb, for example, fixed gear is used only for inshore fishing. This is true also for the coasts of Italy, France and Spain where, however, deep-sea fishing trials with fixed gear have recently been made. Along the coasts of Italy deep longline fishing is carried out, mainly on hake, but this fishing is generally limited in extent and means, and makes use of old-fashioned techniques. A similar situation is observed along the coast of Yugoslavia, but there some progress has been achieved through the introduction of mechanized gear.

37. It may be surprising that the use of fixed gear is so limited on deep Mediterranean fishing grounds, especially in view of the fact that the slope drops steeply and is very broken and thus unsuitable for trawling. Moreover, it is common to find that the most rugged portions of the bottom are precisely the richest ones, as has already been stressed. It may therefore be assumed that efficient fixed gear capable of working untrawlable grounds has not been used to a sufficient extent.

38. In conclusion, from the standpoint of fishing techniques, present-day exploitation of the Mediterranean deep fishing grounds may be considered as a mere extension of fishing on the continental shelf rather than the development of a fishery especially adapted to these depths; moreover, most of the trawling grounds existing on the continental slope are already being exploited, and in certain cases even over-fished, while those portions of the sea bottom unsuitable for trawling are not being fished at all, or only to a slight extent, in spite of the fact that they represent the largest and, sometimes, the richest areas. The steep continental slope could therefore be the object of an interesting exploitation by means of fixed gear, as has been proved by recent trials. In addition, fixed gear have the advantage over trawls, of being less destructive and more selective.

IV. REQUIREMENTS FOR FUTURE DEVELOPMENT

A. ESTABLISHMENT OF A RESEARCH PROGRAMME ON DEEP RESOURCES AND THEIR EXPLOITATION

39. The symposium considers that exploratory research should concentrate on the systematic examination of fishery resources on a seasonal basis in order to determine their qualitative and quantitative distribution with a view to commercial fishing. To this effect a faunistic inventory, well defined in space and time, is required. However, the first exploratory operation should be carried out with trawls or other appropriate gear specially selected for this purpose. These exploratory fishing operations should follow a precise survey design which would take into consideration aspects like catch per hour of fishing (both overall and for valuable species) as well as day and night and seasonal fluctuations of catch. It is recommended that such exploratory fishing be carried out within the following depth ranges: 150 to 250 metres, 250 to 400 metres, 400 to 600 metres, 600 to 800 metres. The scientific investigations on benthic populations should be initiated as a second step, only in such areas where the exploratory fishing has proved the existence, in one or more depth ranges, of resources considered sufficiently important for a profitable exploitation. Since the populations on the continental slope are, from the point of view of trophic relations, inseparable from one another as well as from those on the continental shelf, it will be advisable to carry out their study along a line perpendicular to the coast, from the shallowest to the greatest depths that are considered worthwhile fishing.

40. The most important items to be considered for a detailed research on the benthic populations of the more promising areas would seem to be the following:

(a) Identification of population units (biocenoses and facies)

(b) Study of the benthic biomass by sampling the different population units with appropriate gear, as often as possible and for a period of time sufficient to permit a comparative analysis

(c) Collection of biological and ecological data relating to dominant species (reproduction, trophic relations etc.) and classification of species according to feeding habits

(d) Improvement of the knowledge on the environment (examination of the nature of sediments in relation to currents, hydrology, suspended organic matter etc.)

(e) Preparation of guidelines with a view to achieving, as far as possible, the standardization of the research methods to be used

(f) Compilation of abiotic and biotic data relevant to this research programme and their distribution to Member Nations taking part in the Cooperative Investigations in the Mediterranean.

41. Priority should be given to the following regions: the Mediterranean coast of Egypt, the Aegean Sea, the Southern Adriatic, the eastern coast of Tunisia, the waters around Sicily, and the Alboran Sea.

The symposium considered it necessary to draw the attention of GFCM and ICSEM to the need of promoting such research and of undertaking the preparatory work to facilitate it, particularly the action proposed in points (e) and (f).

B. INTERNATIONAL COORDINATION OF EXPLORATORY SURVEYS AND OTHER RESEARCH ACTIVITIES

42. The symposium stressed the necessity of improving the exchange of information bearing on results of the work performed on a national or international scale in the Mediterranean. It invited its organizers to promote the preparation of standardized data sheets and to establish an intelligence system for the announcement of research cruises in the Mediterranean which would facilitate exchanges of personnel and data and allow a better comparative analysis of results from various sources.

43. With regard to international projects, the symposium felt that their preparation and implementation should take place within the framework of the Cooperative Investigations in the Mediterranean and of the Global Ocean Research Programme. Accordingly recommendation GFCM-ICSEM/69/2 was adopted.

C. IMPROVEMENT OF FISHING METHODS AND GEAR

44. Following the discussions on present-day fishing methods and gear, the symposium decided that the choice of methods and gear to be promoted should be made taking into account their selective characteristics, with a view to protecting the deep resources. It recommended that technological research be concentrated mainly on the following points:

(a) Adaptation of trawls and their rigging to deep-water fishing

(b) Improvement of the equipment of trawlers for deep-water fishing which should include:

- Recording echo-sounders adapted to the depth ranges required
- Radars and other navigational equipment
- Warp tension meters
- Faster winding winches with higher capacity
- Controllable pitch propellers
- Automatic over-tension safety designs
- Netzsonde and other gear-control equipment

(c) Development of the electric trawl, especially in relation to shrimp fishery

(d) Development of the use of fixed gear:

- Continuation of fishing trials with pots for shrimps; with Portuguese-type gillnets; with mechanized longlines

- Modernization of this gear

Introdution of new methods successfully practised elsewhere

(e) Choice of gear with regard to protection of resources:

- Definition of the selective characteristics of fishing gear.

D. MANAGEMENT OF DEEP RESOURCES

45. The discussions led participants to the conclusion that present-day practices such as the continued use of the traditional trawl and in general the non-selective character of fishing activities, as well as the use of increasingly large vessels, tend to lead to over-fishing of trawlable grounds. Fishermen who traditionally had been using long-lines, pots, traps and trammel-nets have now taken to trawling, which at present provides them with a more reliable and regular source of income. They are now fishing in a way and to an extent which endangers the rational exploitation of the available resources. This is indicated by the constant fall in the size of fish caught. Steps must therefore be considered without delay to alter this situation in the fisheries concerned. Resources can be protected by reducing fishing effort (e.g. by taking steps to decrease the number of fishing vessels by establishing catch quotas, by instituting closed seasons or areas or by using more selective gear). In many cases, it is difficult for governments to control the number and fishing capacity of vessels; catch quotas, fishing seasons and areas and gear might be more easily regulated by international conventions. A step in this direction has been suggested in recommendation GFCM-ICSEM/69/4.

46. On the other hand, the symposium considered it necessary to undertake energetic action against pollution. Recent studies have shown indeed that massive dumping of detergents may cause a drop in the oxygen content and thus lead to the impoverishment of bathypelagic and benthic zones.

V. ADOPTION OF THE REPORT AND RECOMMENDATIONS

47. This report was adopted by the participants who formulated the following specific recommendations to the organizers of the symposium:

RECOMMENDATION GFCM-ICSEM/69/1

Considering that accurate exploration of the continental slope faces particular difficulties due to the lack of adequate cartographic work on deeper regions in the Eastern Mediterranean and gaps in the information on the Western basin,

the symposium recommends that its organizers request the International Hydrographic Bureau to prepare a general review on the status of hydrographic and bathymetric data throughout the Mediterranean, in close collaboration with the IOC.

RECOMMENDATION GFCM-ICSEM/69/2

The symposium recommends that international research projects on the exploration of deep-water resources in the Mediterranean be prepared and implemented within the framework of the Cooperative Investigations in the Mediterranean as well as of the Global Ocean Research Programme, and in accordance with the protocole outlined in paragraphs 39, 40 and 41 of the report of the symposium.

RECOMMENDATION GFCM-ICSEM/69/3

Considering that:

- the grounds of the slope are often either unsuitable for trawling or overfished,

- fixed gear may be extremely effective in the exploitation of such areas,

- such gear is more selective and less destructive than trawls,

- high opening bottom trawl is less destructive than the classical trawl,

the symposium recommends that GFCM give high priority, in accordance with the protocole outlined in paragraph 44 of the report of the symposium and within the framework of its Working Party on Demersal Resources Appraisal and Exploitation, to the technological research on fixed gear and the high opening bottom trawl which may both become elements of basic importance in Mediterranean fisheries.

This will require the closest possible collaboration between fishery technologists and biologists.

RECOMMENDATION GFCM-ICSEM/69/4

Considering that:

- present fishing practices lead to overexploitation of trawlable grounds,

- the limitation of fishing effort and the utilization of more selective gear can ensure protection of the stocks,

the symposium recommends to its organizers to induce their Member Nations:

- to facilitate the utilization of more selective fishing gear and techniques, including the high opening bottom trawl

- to establish a common fishery legislation in the Mediterranean basin with a view to the protection of deep biological resources and their rational utilization.

APPENDIX 1

AGENDA

A. INTRODUCTORY AND PROCEDURAL MATTERS

Opening of the symposium
Adoption of the agenda and arrangements for the symposium

B. DEPTH RESOURCES AND THEIR ENVIRONMENT

C. PRESENT STATUS OF THE RESOURCES AND THEIR EXPLOITATION

D. PRESENT METHODS AND GEAR

E. REQUIREMENTS FOR FUTURE DEVELOPMENT

International coordination of exploration and research
Improvements of fishing methods and gear
Management of depth resources

F. ADOPTION OF THE REPORT AND RECOMMENDATIONS

APPENDIX 2

DOCUMENTS PRESENTED TO THE SYMPOSIUM

Les ressources profondes de la Méditerranée occidentale et leur exploitation.

Les ressources des fonds de la Méditerranée: potentiel de développement et limites. J.M. Pérès

Fishing surveys and commercial exploitation of deepwater trawling grounds in the eastern Mediterranean. M. Ben-Yami

Offshore trawl fish from the Mediterranean coast of Israel. L. Zismann

Situation et distribution bathymétrique de l'ichthyobenthos dans le bassin de l'Adriatique méridionale et possibilités d'exploitation. V. Lepetić

Situation et distribution bathymétrique de certaines espèces de penaeidés dans l'Adriatique méridionale. B. Merker

Céphalopodes des eaux profondes de l'Adriatique et leur exploitation. H. Gamulin-Brida et V. Ilijanić

ANNEX VII

REPORT OF THE SECOND MEETING OF THE WORKING PARTY ON UTILIZATION AND MARKETING OF FISH AND FISHERY PRODUCTS

(Rome, FAO Headquarters, 10 December 1969)

INTRODUCTION

1. The working party met on 10 December 1969 on the occasion of the Tenth Session of GFCM to discuss the work carried out in regard to the programme laid down at the Ninth Session of the Council, with the participation of:

Miss F. Soudan (Convenor-Rapporteur); Mr. A. Azouz, Mr. G. Bombace, Mr. C. Di Mento, Mr. M. Krämer, Mr. Cl. Maurin, Mr. C. Mozzi; Mr. W. Krone and Mr. A. Woodland (Technical Secretaries); Mr. V. Perović (FAO consultant).

I. PRESERVATION OF FISH IN ICE AND IN REFRIGERATED SEA WATER

2. The first item of business on the Agenda (Appendix 1) was the examination of the results of the study by the Institute of Fish Preservation Technology, Zadar, Yugoslavia, to compare the preservation of fish in refrigerated sea water (RSW) and in ice (document GFCM/10/69/6). Five tests were performed on a fish collecting vessel at the end of the summer of 1969, using sardines (23 to 25 pieces/kg) and anchovy. These tests showed that:

(a) Chilling of fish is at least one to two hours quicker in RSW than by icing under ideal conditions.

(b) The quality of fish stored in sea water is, in the main, better than that of fish in ice, except with regard to loss of scales. This loss is more pronounced when the loading density is insufficient. The superiority of refrigeration in sea water is all the more marked if fish are immersed immediately after capture. The degree of salt penetration is acceptable for canning. The canned product obtained from sardines stored in RSW is of first quality if the period of storage is not more than 24 hours, and of second quality if this period extends up to three days. After that, unpleasant odours develop. Cleaning and disinfection of the RSW installation are performed very easily after each trip.

The main problem to be resolved is the method of unloading the fish from the tanks. It will be necessary to employ some form of mechanized unloading system, which is known to work satisfactorily elsewhere, and to adapt it to specific conditions existing in the Mediterranean area.

3. The cost benefits analysis made on the basis of the preliminary trials carried out are encouraging. It demonstrates that the benefits through cost reduction of such items as boxes and ice and higher prices that could be obtained by the upgrading of quality more than compensate for the investment and operating costs, but the exact costs and benefits can only be established after termination of the experiments, taking into account different methods of unloading and of commercial application of RSW in the small boat fishery.

4. The working party was keenly interested in these findings. It hoped that:

(a) The experiment with sardines will be extended to a whole year so as to cover all physiological stages

(b) It will also be extended to demersal fish to enable an examination to be made of possible changes in colour, salt concentration, effects on keeping time, etc.

Furthermore it is hoped that the economic benefits of a commercial RSW operation will be assessed in other countries.

5. The working party noted that Israel and Yugoslavia wanted to start or to continue a pilot RSW operation and that other countries showed great interest in collaborating in this programme. It therefore recommended to the Council that FAO be requested to assist in the implementation of this programme, and in particular to contact institutions such as Freedom from Hunger Campaign which might provide the necessary financial support.

II. MARKETING OF FRESH AND FROZEN FISH IN MEDITERRANEAN COUNTRIES

6. With regard to fish marketing (document GFCM/10/69/5), the working party confirmed the rapporteur's observation that fresh fish marketing constitutes a traditional trade which holds its own while frozen fish sells to a different set of customers (for example, in rural markets which should be developed). It was important that consumption should keep pace with increases in production capacity. Expansion of the frozen fish market depends, among other things, on the following factors:

(a) Increase in the number of shops equipped with refrigerated display cabinets (supermarkets, self-service shops, etc.).

(b) Sales presentation (consumers like to use frozen products in the same way as fresh). The question may arise whether it is advisable to sell fish after thawing. This point calls for laboratory study.

(c) The preparation of new products and packs (e.g. cutlets, cakes or minced fish prepared from low value species and intended for institutional and catering sales).

(d) Active promotion aiming at overcoming consumer prejudice against certain species or preparations.

(e) Better quality control. Currently control seems to be concentrated mainly on fresh fish at the wholesale and retail marketing stages. The sale of poor-quality frozen fish must be avoided at all costs.

7. The working party stressed also the importance of developing the fresh fish market and of promoting trade between countries where the same species fetch widely differing prices. Market research should therefore be promoted to enable countries to acquire a better knowledge of species and products which could contribute to enlarging the intra-regional trade in the Mediterranean area and the working party proposed that an assessment of the future demand for fish in member countries be carried out, taking into account the effects of increasing purchasing power and the probable trend of consumer preferences. More detailed information on new fish products and fish preparations processed in the member countries would be useful in order to encourage improved utilization of fish, particularly those species which do not sell readily.

III. REVIEW OF THE TECHNIQUES OF SMOKING CARP, MULLET AND EEL

8. The working party recognized the value of the bibliographical review (document GFCM/10/69/7) prepared by the Secretariat on the smoking of carp, mullet and eel. It is apparent that smoke-curing of fish would present no technological difficulty in Mediterranean countries but that the limiting factor is the small market for smoked fish in the area. Markets will therefore have to be found outside the area and it was suggested that diversified methods of processing will have to be employed to meet consumer preferences of a high-priced speciality market.

IV. FUTURE PROGRAMME OF WORK

9. The working party proposed to continue work along the following lines:

(a) Exchange results of experiments on preserving fish in RSW, carried out or planned in member countries.

(b) Further investigate the use of RSW and determine its economic feasibility for different types of vessels and different fish species.

(c) Encourage tests to determine the keeping time of defrosted fish (different species) under Mediterranean conditions.

(d) Carry out a study to assess existing and future demand for fish in GFCM Member Nations, on the basis of probable trends of national income and consumer preferences.

(e) Collect market data on different types of fish and fish products which are traded between the member countries or could contribute to expand this trade.

(f) Collect detailed information on new fish products and fish preparations, with particular reference to species with low market value.

APPENDIX 1

AGENDA

1. Adoption of the agenda
2. Preservation of fish in ice and in refrigerated sea water
3. Marketing of fresh and frozen fish in Mediterranean countries
4. Review of the techniques of smoking carp, mullet and eel
5. Future programme of work
6. Proposals for membership of the working party
7. Date and place of the next meeting of the working party
8. Other matters
9. Adoption of the report

ANNEX VIII

REPORT OF THE SECOND MEETING OF THE WORKING PARTY ON FISHERY STATISTICS AND BIOLOGICAL SAMPLING

(Rome, FAO Headquarters, 10 and 12 December 1969)

1. Introductory and procedural matters

The Working Party on Statistics and Biological Sampling held its second meeting on 10 and 12 December 1969 at FAO Headquarters, Rome, during the course of the Tenth Session of the Council. As only one member of the working party (Mr. A. Demetropoulos) was present, the meeting was thrown open to participants to the Council session. Those who attended, not necessarily for all agenda items, were:

Mrs. J. Karlovac and Mrs F. Ktari; Mr. G. Bini, Mr. A. Demetropoulos, Mr. M. Krämer, Mr. M. Oliver, Mr. C. Piccinetti, Mr. C. Solamito, Mr. T. Soljan; Mr. L.K. Boerema, Mr. L. Butler and Mr. E. Tamburi (FAO).

In the absence of Mr. O. Rodríguez-Martín, the Convenor, Mr. A. Demetropoulos was nominated in his place.

The working party adopted the agenda (Appendix 1) and Mr. E. Tamburi was appointed as Rapporteur for agenda item 3.

2. Mediterranean and Black Sea Statistical Area

The working party noting that the Tenth Session of the Council had accepted the proposals in the Report of the First Meeting of the working party, with reservations concerning the Western Mediterranean and the western limit of the Black Sea, recommends that:

(a) The section of the boundary between sub-areas 2 and 3 lying along longitude 10°E and latitude 41°N between longitude 10°E and the Italian coast be erased and replaced by a line running due north to the Italian coast from the point 41°20' N, 10°E.

(b) The boundary between sub-areas 3 and 5 lying along latitude 37°N be replaced by a rhumb line joining Cap Bon in Tunisia to Trapani in Sicily.

(c) The boundary between sub-areas 4 and 5 be moved northwards to a line running from the Yugoslav/Albanian frontier on the east coast of the Adriatic Sea due westwards to Cape Gargano on the Italian coast.

(d) The western limit of sub-area 8 be moved westward to the mouth of the Dardanelles.

(e) Maps for statistical purposes incorporating the agreed proposals be prepared and circulated, with an explanatory covering letter, to national offices concerned with Mediterranean and Black Sea fishery statistics (see appendix 3)

3. Classification of species

3.1 List of Species for Statistical Purposes

The working party noted that, consequent to the recommendations of its first meeting, an incomplete draft list had been sent to institutes within the countries fishing the Mediterranean and Black Sea, requesting further information; only eight replies had been received, and hence a revised list could not be prepared.

The working party consequently recommends that the Secretariat continue with their efforts to obtain replies from those institutes that had not replied to the enquiries, with a view to producing a complete list during 1970.

3.2 Revised List of Statistical Categories

The working party considered the working document and recommends that:

(a) Professor G. Bini be requested to supply the Secretariat with his comments on column II of the working paper which lists the scientific names of the main constituents of the statistical categories listed (in English, French and Spanish) in column I.

(b) A revised List of Statistical Categories incorporating Professor Bini's comments be produced and sent to all Member Nations enquiring as to the feasibility of reporting catch statistics according to the statistical categories listed in column I. The replies will be used to further refine the List of Statistical Categories.

3.3 Proposals for the Revision of ISSCAAP

The working party agreed that the nine divisions proposed for a new classification represented an improvement to the existing classification into seven divisions. It was however thought that further improvements were possible at group level and it was proposed that the officers of FAO concerned with the development of the ISSCAAP should be made aware of the following observations:

Group 25: river eels.	Other species subject to culture in brackish water should be added (for example, labrax, Sparus auratus, the Mugilidae).
Groups 33, 34 and 37.	They should be reviewed and re-arranged on the basis of biological and commercial considerations.

4. Vessel-Gear Categories

4.1 Fishing Fleet Statistics

The working party agreed that the lists in Appendix VI of the report of its first meeting be accepted with the following amendments to part I:

(a)	Item 2	Replace "Port d'exploitation" by "Port d'armement"
(b)	Item 14(a)	Delete
(c)	Item 15(a)	Delete
(d)	Item 23(f)(iii)	Delete

and recommends that the final list (Appendix 4) be made available to Member Nations.

The working party further agreed that the breakdown of catch (and fishing effort) by type of gear, e.g. trawl, purse seine, etc. is desirable for general purposes as well as for stock assessment work. It was noted, however, that many countries would have difficulty in reporting statistics by type of gear but the working party was of the view that the Secretariat should initiate work on this subject.

4.2 Shore-Operated Gear

The working party recommends that:

(a) The numbers of each of the gears listed in the working paper and also for "Bordigues" and "Nasses à seiches" should be available in due course for publication in a Regional Bulletin of Fishery Statistics.

(b) The catch of two of the gears mentioned, viz. "Madragues" and "Bordigues", should be available for the same purpose.

Countries of the GFCM might be informed of this recommendation by means of a special letter.

5. Biological Sampling

The working party strongly confirmed the view expressed as its first meeting that statistics of the commercial landings by individual species are indispensable for assessing the state of the fish stocks and the effects of fishing, and that such assessment is greatly facilitated if data are available on the length composition, and if possible the age composition, of the fish in the landings. The working party reviewed the list of species for which these data should be collected (ref. document GFCM/ST/28) and agreed on the list given in Table 1 of this report (appendix 5). This list specifies a number of species for which separate catch statistics are needed, and a more limited number which should receive priority for the collection of detailed data on the length and eventually the age composition of the catches in the various subdivisions of the Mediterranean.

The working party recommends that the GFCM Member Nations make every effort to provide these data for the species indicated in the table. The data on the catch statistics of these species should be included in the standard reporting of the general catch statistics discussed in the previous sections. For reporting of the length and age data special standards are necessary. The working party reviewed document GFCM/ST/27 and recommends that the forms attached as Tables 2, 3 and 4 (appendices 6, 7 and 8) are adopted for this purpose. Table 2 should be used for the reporting of length compositions of the total landings in such cases in which the sampling programme of the species is representative for these landings. In case of less representative sampling or ad hoc sampling on board commercial or research vessels, Table 3 should be used. The working party agrees that priority should be given to the reporting of length composition data, and that the reporting of age-length keys, following the lay-out of Table 4, should be postponed until the reporting of length-composition data is well under way.

6. A Standard Reporting System

The working party considered the document "A Standard Reporting System" in which were developed the general principles and experimental forms for the reporting by national offices of marine catch within the Mediterranean and Black Sea Area by statistical category (section 3.2) and by sub-area (section 2).

The working party noted that such a system was a necessary adjunct to an improved Regional Bulletin of Fishery Statistics and recommends that, as soon as the work on the definitions of statistical categories and sub-areas is completed, sets of forms should be sent to selected countries with a view to testing the feasibility of the system.

7. Programme of work

The working party considered the document "Programme of Work" in conjunction with its terms of reference listed in Appendix H to the Report of the Ninth Session of the Council. It was noted that work had been commenced on all the items to which the Ninth Session had given priority and that sufficient work could stem from merely continuing work on these items. It was, however, added that if the work progressed at a quicker rate than was expected, the Secretariat might initiate work on the question of fishing effort. It was also particularly noted that with regard to the development of a Biological Sampling Yearbook the Secretariat would send copies of forms developed for this purpose (section 5) to selected laboratories and institutes for completion and return.

8. Other matters

8.1 Species Identification Sheets for Statistical Purposes

The Secretariat explained the objectives and background of the project on Species Identification Sheets for Statistical Purposes, initiated by FAO in collaboration with various regional fishery bodies of the world. The meeting was invited to consider whether such a project should also be implemented in the Mediterranean and Black Sea Area. There was unanimous agreement to this proposal and the FAO outline for the preparation of Species Identification Sheets was approved, but a suggestion was made that, if possible, a map showing the distribution of the species should be printed on the form.

The meeting proposed that the following action should be taken:

(a) To nominate Professor G. Bini as general coordinator of the project and one expert for each of the three areas of the Mediterranean - Eastern, Central and Western - and one for the Black Sea. The experts proposed were: A. Ben-Tuvia (eastern area), G. Bini (central area), F. Lozano (western area), A.N. Svetovidov (Black Sea). Professor Bini would also be responsible for the definition of the area of interest of each expert.

(b) To commence the preparation of Species Identification Sheets for the species included in the List of Species of Major International Interest for Stock Evaluation Purposes, adopted by the working party (see section 5 of this report).

(c) To authorize the Secretariat to decide, in close collaboration with the coordinator, on final details concerning the presentation of the sheets and extend, if necessary, the list of species for this project.

The meeting was informed that an identification key for all fish species of the Mediterranean was being prepared by Professor Soljan and recommends that support should be given to this undertaking within the framework of the Cooperative Investigations in the Mediterranean, with special reference to theme 4 of the Biological and Fisheries Programme.

8.2 Membership of the working party

It was agreed that the working party continue with a new membership to be decided by the Executive Committee in consultation with the Member Nations and the Secretariat.

8.3 Date and place of Third Meeting of the working party

The working party agreed that intersessional meeting were necessary to the development of work in the field of fishery statistics and biological sampling and recommends that provision be made for a third meeting of the working party to be held in Rome early in 1971.

APPENDIX 1

PROVISIONAL AGENDA

1. PROCEDURE AND INTRODUCTORY MATTERS
   - 1.1 Opening of the meeting
   - 1.2 Nomination of the convenor
   - 1.3 Adoption of the agenda
   - 1.4 Nomination of rapporteurs
2. MEDITERRANEAN AND BLACK SEA STATISTICAL AREA
3. CLASSIFICATION OF SPECIES
   - 3.1 List of Species for Statistical Purposes
   - 3.2 Revised List of Statistical Categories
   - 3.3. Proposals for the revision of ISSCAAP
4. VESSEL - GEAR CATEGORIES
   - 4.1 Fishing fleet statistics
   - 4.2 Shore operated gear
5. BIOLOGICAL SAMPLING
6. A STANDARD REPORTING SYSTEM
7. PROGRAMME OF WORK
8. OTHER MATTERS
9. ADOPTION OF THE REPORT

APPENDIX 2

LIST OF DOCUMENTS PREPARED FOR THE MEETING

GFCM/ST/17	Mediterranean and Black Sea statistical area
GFCM/ST/18	Revised list of statistical categories
GFCM/ST/19	List of species for statistical purposes.
GFCM/ST/20	Proposals for the revision of the International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP)
GFCM/ST/21	Fishing fleet statistics - Vessel and gear categories
GFCM/ST/22	Shore operated gear
GFCM/ST/23	A standard reporting system
GFCM/ST/24	Programme of work
GFCM/ST/25	Provisional agenda
GFCM/ST/26	Species identification sheets for statistical purposes
GFCM/ST/27	Biological sampling. Formats for reporting length and age data
GFCM/ST/28	Biological sampling. List of species of major international interest for stock evaluation purposes

ZONE STATISTIQUE MEDITERRANEE ET MER NOIRE, SUBDIVISEE EN SOUS-ZONES

(Dans le cartouche: limite occidentale)

MEDITERRANEAN AND BLACK SEA STATISTICAL AREA BY SUB-AREA

(See inset for western limit)

APPENDICE
APPENDIX 3

APPENDIX 4

Part I - SUGGESTED DATA TO BE COLLECTED FOR LARGER FISHING VESSELS

I. IDENTIFICATION

1. Country
2. Home port
3. Name of vessel and/or registration number
4. Name of owner
5. Type of vessel
   (a) fishing
   (b) mother ship
   (c) carrier
   (d) other

II. HULL CHARACTERISTICS

6. Overall length (m)
7. Overall breadth (m)
8. Depth (m)
9. Gross registered tonnage
10. Year built
11. Country in which built
12. Hull conversion (nature of conversion) - year
13. Building materials
    (a) aluminium
    (b) cement
    (c) fibre glass
    (d) plastic
    (e) steel
    (f) wood
    (g) other

III. CHARACTERISTICS OF ENGINES

14. Main engine
    (a) motor
    (b) other
15. Propulsion
    (a) oil
    (b) petrol/diesel
    (c) other
16. Capacity fuel bunker (m3)
17. Power main engine (HP)
18. Year main engine installed
19. Power auxiliary engines (HP)
20. Propeller: revolutions per minute
21. Propeller
    (a) fixed
    (b) controllable pitch
    (c) Kort nozzle
    (d) other
22. Average cruising speed

IV. FISHING CHARACTERISTICS

23. Type of fishing gear
    (a) line
        (i) pole and line
        (ii) longlining
        (iii) hand lining
        (iv) trolling
    (b) pots and traps
    (c) dredge (shell fish)
    (d) trawling
        (i) a. single
            b. pair
        (ii) a. side
             b. stern without ramp
             c. stern with ramp
        (iii) a. midwater (pelagic)
              b. bottom (otter or pair)
              c. beam
              d. double beam
    (e) Danish seine
    (f) purse seine
        (i) single vessel
        (ii) single vessel (with skiff)
    (g) lampara net
    (h) lift net
    (i) gill net
        (i) drift
        (ii) bottom

(j) fish pump
(k) other

V. CREW

24. (a) single purpose vessels - total men on board
(b) multi-purpose vessels - total men on board by gear utilized

VI. TOTAL FISH HOLD CAPACITY

25. (a) without installation
(b) insulated
(c) mechanically refrigerated
(d) deep freeze
(e) water tank (refrigerated sea water or tanks for live fish, shell fish, or bait)

VII. EQUIPMENT

26. Capacity of freezing equipment (tons per 24 hours)

27. Electronic equipment

(a) radio
(b) radio V.H.F.
(c) radar (No. of instruments)
(d) echo-sounder, vertical (No. of instruments)
(e) echo-sounder, horizontal or ranging (No. of instruments)
(f) Decca
(g) Decca navigator
(h) Loran
(i) auto-pilot
(j) direction finder
(k) facsimile receiver
(l) netzsonde
(m) warp tension indicator
(n) other

28. Other equipment

(a) power block
(b) side thrust propeller
(c) fish pump
(d) powered net drum
(e) fishing with lights
(f) electric fishing gear
(g) other

Part II - SUGGESTED DATA TO BE COLLECTED FOR SMALLER FISHING VESSELS

I. IDENTIFICATION

1. Country

2. Home port

3. Name of vessel or registration number

4. Type of vessel

(a) fishing
(b) non-fishing

II. HULL CHARACTERISTICS

5. Overall length (m)

6. Gross registered tonnage

7. Propulsion

(a) motor
(b) sails and/or oars

8. Power main engine (HP)

III. FISHING CHARACTERISTICS

9. Type of fishing gear

(a) line
(b) pots and traps
(c) dredge (shell fish)
(d) trawling
(e) purse seine
(f) lampara
(g) lift net
(h) gill net

IV. CREW

10. Total men on board

V. EQUIPMENT

11. Electronic equipment

(a) radio
(b) echo-sounder
(c) direction finder
(d) other

12. Other equipment

(a) power block
(b) fishing with lights
(c) other

Tableau 1 Liste des espèces d'intérêt international majeur pour les études d'évaluation des stocks, avec indication des espèces qui devraient recevoir priorité* pour l'échantillonnage de composition de longueur et d'âge des captures commerciales

Table 1 List of species of major international interest for stock evaluation studies, and list of species which should receive priority* for sampling for length and age composition of the commercial catches

	A Espèces pour lesquelles des statistiques de capture séparées devraient être recueillies Species for which separate catch statistics should be collected					B Espèces qui devraient recevoir priorité dans les études de longueur et d'âge Species which should receive priority in length and age studies				
Région de la Méditerranée Mediterranean region	Occidentale Western	Centrale Central			Orientale Eastern	Occidentale Western	Centrale Central			Orientale Eastern
Sous-zone statistique Statistical sub-area	1,2,3	4	5	6	7	1,2,3	4	5	6	7
Espèce/Species										
Solea solea	x	x	x	x			x	x	x	
Merluccius merluccius	x	x	x	x	x	x	x	x	x	x
Micromesistius poutassou	x					x				
Mullus barbatus	x	x	x	x	x	x	x	x	x	x
Upeneus moluccensis					x					
Saurida undosquamis			x	x	x					
Boops boops	x	x	x	x						
Pagellus erythrinus	x		x		x	x	x	x		
Trachurus trachurus	x	x	x			x	x	x		
Clupea sprattus		x					x			
Engraulis encrasicholus	x	x	x	x	x	x	x	x	x	x
Sardinella aurita	x		x		x	x		x		x
Sardina pilchardus	x	x		x		x	x			
Sardinella maderensis					x					
Thunnus thynnus	x	x	x	x	x	x	x	x	x	x
Thunnus alalunga	x									
Sarda sarda	x			x		x			x	
Xyphias gladius	x									
Auxis rochei	x				x					
Euthynnus alleteratus	x	x	x		x	x	x	x		x
Scomber scombrus	x	x		x					x	
Scomber colias(=japonicus)	x		x		x	x		x	x	x
Nephrops norvegicus	x	x				x	x			
Palinurus vulgaris	x	x								
Penaeus keraturus	x	x	x	x		x				
Aristeus antennatus Aristeomorpha foliacea	x					x				
Parapenaeus longirostris	x					x				
Sepia officinalis	x	x	x							
Loligo vulgaris	x	x	x							
Eledone	x	x	x							

*Quelques espèces ne sont pas séparées des espèces voisines dans les captures commerciales de certains pays. Dans de tels cas les statistiques des débarquements demandées dans la colonne A pourraient être estimées après échantillonnage des captures.

*Some species are not separated from related species in the commercial catches of some countries, and the statistics of the landings requested in column A might in such cases be estimated from a sampling programme of the catches.

APPENDICE 6
APPENDIX

Tableau 2 Distribution de longueurs par espèce, obtenue à partir d'un programme général d'échantillonnage de marchés (nombre estimé des apports totaux)

Table 2 Length distribution by species, obtained from comprehensive market sampling (estimated number in total landings)

Année 19..
Year

Pays Country				
Sous-zone Sub-area				
Espèce Species				
Engin de pêche Gear				
Mois Month	janvier January	février February	mars ..... décembre March ..... December	Année Year
Catégorie de tonnage Tonnage group				
Longueur Length 20 - 21 9 cm 22 - 24 - . . . . . etc.				
TOTAL				
Nombre d'échantillons Number of samples				
Nombre de poissons mesurés Number of fish measured				
Poids total des poissons mesurés Weight of fish measured				
Longueur moyenne (cm) Mean length				
Poids moyen (g) Mean weight				
Poids total des apports Total weight landed				
Profondeurs Range of depths				

APPENDICE 7
APPENDIX

Tableau 3 Distribution de longueurs par espèce, obtenue à partir des prises de navires de recherche ou par un échantillonnage ad hoc des prises commerciales (distribution de longueurs o/oo)

Table 3 Length distribution by species, obtained from research vessel catches or ad hoc sampling of commercial catches (o/oo length distribution)

Année
Year 19..

Pays Country				
Zone Area				
Espèce Species				
Engin de pêche Gear				
Recherche/commercial Research/commercial				
Mois Month	janvier January	février February	mars ..... décembre March ..... December	Année Year
Longueur Length 20 - 21 9 cm 22 - 24 - . . . . etc.				
TOTAL o/oo				
Nombre des échantillons Number of samples				
Nombre de poissons mesurés Number of fish measured				
Poids total des poissons mesurés Weight of fish measured				
Longueur moyenne (cm) Mean length				
Poids moyen (g) Mean weight				
Poids total des apports Total weight caught ou/or Nombre total des apports Total number caught				
Dimension de la maille(mm) ou nombre d'hameçons Mesh size (mm) or hook number				
Profondeurs Range of depths				

APPENDICE 8
APPENDIX

Tableau 4 Clef âge-longueur, de l'échantillonnage des apports
Table 4 Age length key, from market sampling

Année 19.. - 1er trimestre
Year 19.. - 1st quarter

Pays	Country
Sous-zone	Sub-area
Espèce	Species
Engin de pêche	Gear
Catégorie de tonnage	Tonnage group
Structure utilisée pour la détermination de l'âge	Structure used in age determination

Longueur / Length — Classe annuelle / Age / Yearclass	1 19..	2 19..	3 19..	..	Nombre de relevés d'âge Number of age readings	Nombre total de poissons débarqués Number of fish in total landings jan. fév. mars Jan. Feb. March
20 - 21 9 cm						
22 -						
24 -						
.						
.						
etc.						

Nombre d'échantillons d'âge — Number of age samples

Composition des apports par âge — Age composition of the total landings

Mois/Month — Age	1	2	3	.	.	Total
janvier January						
février February						
mars March						

Note: Dans le cas d'échantillonnage ad hoc, le schéma du tableau serait le même que celui donné ci-dessus, sauf que la composition des longueurs pour mille (o/oo) remplacerait la composition des longueurs de la totalité des débarquements et que la section donnant la composition de l'âge de la totalité des débarquements serait omise.

Note: In the case of ad hoc sampling, the table would be of the same general outline as that given above, except that the per-mille length composition would be given instead of the length composition of the total landings, and that the box giving the age composition of the total landings would be omitted.

ANNEX IX

REPORT OF THE SECOND MEETING OF THE WORKING PARTY ON FRESH, BRACKISH AND HYPERSALINE WATER FISHERIES

(Rome, FAO Headquarters, 11 and 12 December 1969)

INTRODUCTION

1. The Working Party on Fresh, Brackish and Hypersaline Water Fisheries met on 11 and 12 December 1969 during the Tenth Session of the GFCM.

2. Dr. R. Raimbault, Convenor, acted as the Chairman, and Dr. O.H. Oren was elected to function as the Rapporteur during the meeting which was also attended by Mr. P. Arena, Mr. A. Azouz, A. Demetropoulos, Mr. D. Morović, Mr. C. Mozzi, Mr. M. Oliver, Mr. J. Zombolas. Dr. T.V.R. Pillay and Mr. M.N. Mistakidis acted as technical secretaries.

3. The working party adopted the agenda in Appendix 1.

I. TITLE OF THE WORKING PARTY

4. The working party gave detailed consideration to the recommendation that its title should be changed to give a better description of its activities. In view of the fact that the working party will eventually have to concern itself also with the fisheries of lagoons and estuarine areas, it was finally decided to recommend to the Council that the name of the working party should be amended to Working Party on Aquaculture and Fisheries in Brackish Waters, although its programme of work will concentrate on aquaculture for the present.

II. REVIEW OF WORK IN MEMBER COUNTRIES

5. In the absence of the authors, S. El-Zarka, A.M. El-Maghraby and K. Abdel Hamid, the Chairman presented the technical paper submitted to the Council, entitled "Studies on the distribution, growth and abundance of migrating fry and juveniles of mullet in a brackish coastal lake (Lake Edku) in the U.A.R.". Following this, each of the participants gave an oral report on the brackish water aquaculture activities in his country. It was observed with satisfaction that action is being taken in most countries of the region to initiate or expand work in this field.

III. IMPLEMENTATION OF THE FIRST MEETING RECOMMENDATIONS

6. The remaining part of the meeting was utilized largely for the discussion of ways and means of implementing the various recommendations of the first meeting of this working party.

A. SEMINAR ON BRACKISH WATER AQUACULTURE

7. The working party had recommended (Recommendation 3) that the Council should approach FAO to organize as early as possible under the United Nations Development Programme/Technical Assistance (UNDP/TA) a regional seminar on brackish-water fish culture and another on mollusc culture. The Secretariat explained that to obtain the UNDP support for seminars, it would be necessary to have written evidence of the interest of at least three developing countries of the region and also a Commitment of the host country to provide the necessary facilities. Taking into account the fact that there is an immediate need to impart essential instruction in the techniques of both brackish water fish culture and mollusc culture and that there is very little likelihood of the UNDP providing support for two regional projects in one year, it was decided by the working party that efforts should be made to organize a broad-based seminar which would cover all aspects of brackish water aquaculture. With regard to the host country facilities, various offers were made, for example to hold it in France, Israel or Italy and it was agreed that a final selection should be made after FAO has explored the possibilities of financing and other support required for organizing the seminar.

[illegible]

[illegible] The working party discussed the preparation of synopses of biological data on [illegible] molluscs (mussels and oysters) and shellfishes (Recommendation 5). It was suggested that Prof. J.H. Thompson of Australia should be requested to up-date his synopsis on Mytilus edulis. For the other species the following authors were suggested:

[illegible]	Mrs. L. Eyzaguirre (Israel)
[illegible]	P. Arena (Italy)
[illegible]	P. Arena (Italy)
[illegible]	J. Natoli (Italy)
[illegible]	F. Lubet (France)
[illegible]	R. Vaissault (France)
[illegible]	R. Vaissault (France)

[illegible]

[illegible] A lengthy discussion took place on the implementation of the recommendation 6 that [illegible] should be coordinated by the Council. Consideration was given to a proposal that the Council should recommend research to be undertaken by selected institutions and scientists in the region, to enable rapid progress to be made in investigations in this field. Although it was recognized that such an arrangement would be extremely valuable for the development of research in the region as a whole, it was also realized that there may be practical difficulties in implementing this. An alternative was therefore suggested that the Secretariat should contact the heads of institutions and scientists in the member countries to ascertain their willingness and ability to carry out selected items of research recommended by the Council. At a future meeting of this working party it should be possible to make final decisions on this and review a procedure for coordination of this type of activity.

[illegible]

[illegible] The working party noted that Recommendation 4 of the fact that the FAO Fish Culture Bulletin is serving as an excellent source of disseminating information on developments in fish culture and recommended that in producing such a useful publication. It suggested that the Council request that to expand the scope of the Bulletin and increase its [illegible].

[illegible]

[illegible] With reference to the recommendation 7 that the IPFC maintain close liaison with [illegible] and non-governmental bodies engaged in the promotion of aquaculture, Dr. Lin Chen, who is responsible for the IBP activities on grey mullets, reported on the [illegible] that is being maintained with FAO and informed the working party of the arrangement that is being made to exchange information on the work of IBP in the field of grey mullet in the FAO Fish Culture Bulletin.

[illegible]

[illegible] The working party gave detailed consideration to the suggestion of the plenary session that it should also concern itself with the transplantation and acclimatization of marine species in the region to improve the fishery resources. In this connection, it was brought to the attention of the meeting that several economically important [illegible] species such as mullet had spontaneously migrated into the eastern Mediterranean by way of the Suez Canal and since then the Black Sea and the Aegean Sea also have established themselves in nearly the entire Mediterranean. The problems related to the introduction of exotic species, particularly the influence on the indigenous fauna, were discussed. In view of their complexity and the magnitude of the work related to the present programme of the working party, it was the unanimous view of the meeting that the working party should not include this in its present activities. However, as IBP work progresses and the results of studies on the acclimatization of locally occurring species indicate the need for the introduction of other species into the region, the working party should devote attention also to this [illegible].

13. The delegates of Cyprus, Greece and Tunisia expressed the interest of their countries in the culture of sponge. Greece is also interested in algae culture.

V. SYMPOSIUM IN CONJUCTION WITH THE ELEVENTH SESSION

14. In view of the widespread interest for aquaculture in brackish water in the area, and the research and development work that is expected to be carried out during the inter-sessional period, particularly as a result of the Council's proposals, the working party recommended that a symposium on this subject be held for a period of two to three days before the Eleventh Session of the Council. The symposium should cover all aspects of brackish water aquaculture, but special emphasis should be laid on the culture of Mugil spp. and Sparus auratus (=Chrysophrys aurata).

APPENDIX 1

AGENDA

1. Adoption of the agenda and organization of the meeting
2. Presentation of technical papers
3. Title, terms of reference and suggestions for membership of the working party
4. Seminar on brackish water aquaculture for the Mediterranean region
5. Selection of authors for the preparation of synopses of biological data on cultivable brackish-water fishes
6. Priority and implementation of research programmes in brackish-water aquaculture in the Mediterranean region
7. Coordination of research and dissemination of information on the results of research
8. Liaison with intergovernmental and non-governmental bodies
9. Other matters
10. Adoption of the report of the meeting
11. Date and place of the next meeting

ANNEX X

REPORT OF THE FIRST MEETING OF THE WORKING PARTY ON DEMERSAL RESOURCES APPRAISAL AND EXPLOITATION

(Rome, FAO Headquarters, 11 December 1969)

1. The working party met on 11 December 1969 on the occasion of the Tenth Session of the GFCM with the following persons attending: Mrs. J. Karlovac and Mrs. F. Ktari, Mr. S. Alfirević, Mr. I. Artüz, Mr. G. Bini, Mr. G. Bombace, Mr. A. Demetropoulos, Mr. C. Di Mento, Mr. I. Hoenigman, Mr. S. Jukić, Mr. M. Krämer, Mr. M. Massuti, Mr. C. Piccinetti, Mr. J.-P. Ribaut, Mr. A. Scaccini, Mr. T. Soljan, Mr. E. Talamo; Mr. W. Fischer (Technical Secretary) and Mr. L.K. Boerema (FAO).

2. Mr. C. Piccinetti was appointed Chairman-Rapporteur of the meeting.

3. The agenda in Appendix 1 was adopted.

4. Information was given to participants on the work carried out in several countries following the recommendation of the Ninth Session requesting:

(a) initiation of a sampling programme on hake, sole, red mullet and bream;

(b) determination of the degree of selectivity of the Mediterranean trawl;

(c) continuation of deep-sea exploratory fishing.

Albeit incomplete, the data obtained are valid. The working party concluded, however, that future standardization of research methods was necessary. The meeting noted with satisfaction that the high opening bottom trawl was the subject either of experimentation or of commercial use on the continental shelf in several countries, in particular France, Italy and Spain. It also noted that further work is required in order to improve the efficiency of this trawl and it underlined the conclusions of the GFCM-ICSEM Symposium on Mediterranean Depth Resources and their Exploitation concerning the usefulness of fixed gear for deep-sea fishing in view of its selectivity.

5. The following technical papers were submitted to the assembly:

- The Norway lobster (Nephrops norvegicus L.) catch and associated populations in the Yugoslav trawl fishery of the central Adriatic Sea (S. Jukić)

- Diurnal and seasonal variations in the catch of Nephrops norvegicus L. in the central Adriatic Sea (S. Jukić)

- Variations of fishing yield (kg/h) on the continental shelf of the Balearic Islands between 1958 and 1969 (M. Massuti) (in French)

- Deep sea shrimp fishing. Studies on yields of a new vessel equipped for selective fishing with fixed gear. Survey of new fishing grounds around the Balearic Islands (M. Massuti) (in French)

- New bionomic studies of the deep shrimp grounds around the Balearic Islands after a ten-year period of exploitation (M. Massuti) (in French)

- Contribution to the knowledge of the ecology of Trachurus trachurus in the Upper Adiatic (J. and O. Karlovac) (in French)

These papers provided useful information on the variations in relative abundance of the species and in the yield obtained from pot fishing in the Balearic Islands during the last decade at depths between 150 to 750 metres, and on the distribution of eggs, larvae, pot-larvae and adults of Trachurus trachurus in the Adriatic in relation to various ecological factors.

6. The papers on the Norway lobster, which demonstrate an appreciable decrease in the size of this species over the past 20 years, greatly impressed the participants. These findings, together with the studies which had been performed in the Balearic Islands and showing the negative effect of fishing on the species composition of populations living on the continental slope, and the additional information that emerged during the discussion, caused the working party to submit the following resolution to the Council:

RESOLUTION/DEM/69/1

The Council,

considering that the situation regarding some stocks of demersal species of commercial importance, living on the shelf, and even on the slope, gives rise to anxiety,

considering especially that there are definite signs of overfishing in the case of certain species,

considering furthermore that this alarming situation has already led several Mediterranean countries to promote measures to reduce fishing effort,

recommends that rational measures in the legislative, administrative and technical fields be taken by Member Nations and transposed to a regional Mediterranean level in order to ensure the protection and reconstitution of threatened stocks.

7. In order to facilitate the preparation of such measures, the participants expressed the wish that a core of experts on population dynamics be established within the framework of the Working Party on Demersal Resources Appraisal and Exploitation. These experts will assemble and analyse all available information with the aid of the Secretariat of the GFCM and report on their findings and their observations on the effect which various regulatory measures might have on the catches, to the second meeting of the working party. In view of the fact that several areas of the shelf (and sometimes of the slope) are being very intensively fished, it would be desirable to orient the research of these experts towards these zones.

8. The Secretariat was requested to contact various Mediterranean experts in order to complete the Sète report on deep resources of the Western Mediterranean as quickly as possible, and to arrange for the preparation of a similar report for the Eastern Mediterranean.

9. The working party discussed in detail the list of species prepared by the Working Party on Fishery Statistics and Biological Sampling for stock assessment studies. Several changes were proposed to this list, and it was decided that eight demersal species should be studied in priority, namely hake (Merluccius merluccius), sole (Solea solea), striped mullet (Mullus barbatus), pandora (Pagellus erythrinus), horse mackerel (Trachurus trachurus), red shrimps (Aristeus antennatus and Aristeomorpha foliacea), white shrimp (Parapenaeus longirostris).

10. It was proposed that a Symposium on the protection and rational use of the demersal resources of the Mediterranean be organized in connection with the Eleventh Session of the Council.

11. The working party requested the GFCM to explore the possibility of arranging a course on stock assessment for the Mediterranean region. This could probably be combined with the regional training course on sampling procedures for purposes of fish stock assessment recommended by the Working Party on Fishery Statistics and Biological Sampling (see paragraph 7-h, page 6).

12. The working party's terms of reference for the next biennium were revised in the light of the recommendations of the symposium and of the programmes envisaged for the Cooperative Investigations in the Mediterranean. They are as follows:

(a) To promote deep-sea fishing experiments with fixed gear and the high opening bottom trawl.

(b) To propose standardized methods for the study of yields from various kinds of gear.

(c) To assess the stocks of the species listed in paragraph 9 above which are at present intensively fished and to study their population dynamics in relation to fishing and natural factors. (Among the latter, immigration of species from neighbouring seas will be considered).

(d) To study feeding habits of demersal species of commercial value, mainly on the basis of stomach content analysis, with a view to a better understanding of the benthic food-web relationships.

(e) To study concrete measures for the protection and restocking of fishing grounds.

13. The membership of the working party during the bienning 1970-71 will be decided upon by the Executive Committee, in consultation with the Member Nations and the Secretariat.

14. The date and place of the intersessional meeting of the working party will be fixed in consultation with the Convenor to be appointed, and FAO.

APPENDIX 1

AGENDA

1. Adoption of the agenda and organization of the meeting
2. Additional information related to the recommendations of the Ninth Session
3. Presentation of technical papers
4. Follow-up of the recommendations of the symposium on deep resources
5. Preliminary discussions on areas and species requiring management measures
6. Revision of the priority list of species for biological sampling
7. Revision of the terms of reference of the working party
8. Date and place of the next meeting of the working party
9. Other matters
10. Adoption of the report

ANNEX XI

REPORT OF THE AD HOC WORKING PARTY ON MARINE POLLUTION IN THE MEDITERRANEAN AND ITS EFFECTS ON LIVING RESOURCES AND FISHING

(Rome, FAO Headquarters, 10 and 12 December 1969)

1. The ad hoc working party met on 10 and 12 December 1969. It consisted of the following participants:

Mr. O.H. Oren (Convenor); Mr. S. Alfirević, Mr. I. Artüz, Mr. E. Gelosi, Mr. R. Raimbault, Mr. J.-P. Ribaut, Mr. A. Scaccini and Miss F. Soudan (Members); Mr A. Luciano (Observer); Mr. G. Tomczak and Mr. L.E. Andrén (Technical Secretaries).

2. The working party noted the urgent need for more information on the contamination of coastal areas and the high seas by domestic and industrial waste brought into the Mediterranean either by rivers and coastal outlets or by pipelines or sewage dumped from ships and barges. It was felt that this information should be collected by the aid of a questionnaire to be sent by the Council to all the countries bordering the Mediterranean.

3. The Secretariat had prepared a questionnaire, the first draft of which was reviewed by the working party which also approved its final form resulting from the discussions. It was decided that the information given by the replies to the questionnaire should be used as basic material for the compilation of a report on the state of pollution in the Mediterranean, which should be written by a small group of experts in the field of marine pollution. It was contended that this study should also contain a brief survey of the main hydrographic conditions in the Mediterranean, which could be divided into four separate regions, such as: the western and eastern zones, the Adriatic Sea and the Black Sea.

4. Bearing in mind the recommendations outlined in document GFCM/10/69/16 which had previously been discussed in the plenary session of the GFCM, the working party submitted the following two resolutions for the approval of the Council:

RESOLUTION/POL/69/1

The Council,

taking into account that pollution of the environment is a fast growing problem also in the Mediterranean and that there is therefore an urgent need for the countries bordering this sea to be cognizant of the utmost information regarding the present state of pollution in this area and its future trends,

noting that discharged waste may not be rapidly diluted and dispersed by natural processes because of the enclosed nature of the Mediterranean Sea, and that for this reason the problem is particularly urgent,

considering that the International Conference on Oil Pollution of the Sea, held in Rome from 7 to 9 October 1968, asked the GFCM in its Resolution No. 4 to undertake, if possible, jointly with ICSEM, steps to provide for the scientific basis for action with regard to the pollution of the Mediterranean,

recommends that information on the state of the pollution along the coasts of the countries bordering the Mediterranean should be collected by means of a questionnaire as drafted by its ad hoc working party,

proposes that Member Nations of the Council nominate a scientist familiar with the pollution problems of his country to act as contact officer with the Secretariat and that the Council should urge the Member Nations to support their contact officer in completing the questionnaire,

further proposes that those countries not members of the GFCM be asked to cooperate with it in the field of marine pollution by also nominating a contact officer in order to make the information as complete as possible.

RESOLUTION/POL/69/2

The Council,

taking into account that in the FAO Technical Conference on Marine Pollution and its Effects on Living Resources and Fishing, to be held in Rome from 9 to 18 December 1970, one section entitled "Marine Pollution in the World Today", will review pollution problems in selected areas,

considering that a review on the state of the pollution in the Mediterranean would be a suitable contribution to this section of the Conference,

noting that the information collected by the questionnaire which was drafted by the ad hoc working party could be used as a suitable basis for such a review,

decides to establish a small group of experts in the field of marine pollution aimed at writing the review. This group should consist of two experts, nominated by the Council, who are familiar with pollution effects on marine life;

considering further that a close scientific cooperation with the International Commission for the Scientific Exploration of the Mediterranean Sea (ICSEM) should be ensured in this field,

suggests that ICSEM be asked to co-sponsor this group of experts by also nominating two members.

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